IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A packet communications method for carrying out packet communications between a base station and a mobile station located in an area controlled by the base station, the method comprising:

establishing a list of available modulation schemes, each modulation scheme having an available transmission block size;

detecting a channel quality in the packet transmission direction between the base station and the mobile station;

detecting the amount of data buffered in a transmission buffer of a sender; and

determining a modulation scheme to be used in the packet communications based on the channel quality in the packet transmission direction and the buffered data amount, said determining including determining the modulation scheme by selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered, the modulation scheme being determined such that a prescribed communication condition is satisfied, and that padding, which is added to the data buffered in the transmission buffer of the sender when the buffered data amount is less than a transmission unit size, becomes the minimum, based on the channel quality in the packet transmission direction and the buffered data amount.

Claim 2 (Canceled).

Claim 3 (Currently Amended): A base station that carries out packet communications with a mobile station located in an area controlled by the base station, the base station comprising:

a modulation scheme listing unit configured to establish a list of available modulation schemes, each modulation scheme having an available transmission block size;

a channel quality detecting unit configured to detect a channel quality in the packet transmission direction between the base station and the mobile station;

a buffered data monitoring unit configured to monitor the amount of data buffered in a transmission buffer of the base station; and

a modulation scheme determination unit configured to determine a modulation scheme for the packet communications based on the channel quality in the packet transmission direction and the buffered data amount in the transmission buffer, said modulation scheme determination unit configured to determine the modulation scheme by selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered, the modulation scheme determination unit configured to determine the modulation scheme that satisfies a prescribed communication condition, and that makes padding, which is added to the data buffered in the transmission buffer when the buffered data amount is less than a transmission unit size, become the minimum, based on the channel quality in the packet transmission direction and the buffered data amount.

Claim 4 (Canceled).

Claim 5 (Currently Amended): A mobile station that carries out packet communications with a base station, comprising:

a modulation scheme listing unit configured to establish a list of available modulation schemes, each modulation scheme having an available transmission block size;

a channel quality detecting unit configured to detect a channel quality <u>in the packet transmission direction</u> between the base station and the mobile station;

a buffered data monitoring unit configured to monitor the amount of data buffered in a transmission buffer of the mobile station; and

a modulation scheme determination unit configured to determine a modulation scheme for the packet communications based on the channel quality <u>in the packet transmission direction</u> and the buffered data amount in the transmission buffer, said modulation scheme determination unit configured to determine the modulation scheme by selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered<u>, the modulation scheme determination unit configured to determine the modulation scheme that satisfies a prescribed communication condition, and that makes padding, which is added to the data buffered in the transmission buffer when the buffered data amount is less than a transmission unit size, become the minimum, based on the channel quality in the packet transmission direction and the buffered data amount.</u>

Claim 6 (Canceled).

Claim 7 (Currently Amended): A computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform a method comprising:

causing a sender to establish a list of available modulation schemes, each modulation scheme having an available transmission block size;

causing the sender to detect a channel quality <u>in the packet transmission direction</u> between the base station and the mobile station;

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causing the sender to detect the amount of data buffered in a transmission buffer of the sender; and

causing the sender to determine a modulation scheme for the packet communications based on the channel quality in the packet transmission direction and the data amount in the transmission buffer of the sender, said determining including determining the modulation scheme by selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered, the modulation scheme being determined such that a prescribed communication condition is satisfied, and that padding, which is added to the data buffered in the transmission buffer of the sender when the buffered data amount is less than a transmission unit size, becomes the minimum, based on the channel quality in the packet transmission direction and the buffered data amount.

Claim 8 (New): The packet communications method according to claim 1, wherein the prescribed communication condition is satisfied when a signal to interference noise ratio corresponding to the channel quality in the packet transmission direction exceeds a minimum signal to interference noise ratio for the modulation scheme.